

The second 50 years of entomology in British Columbia – a brief perspective

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Fifty years ago the history of entomology in the Province was reviewed in seven articles dealing with different regions or subjects in our journal, then called the *Proceedings* (Vol. 48, 1952).

It was the heyday of chlorinated hydrocarbon pesticides and new government laboratories were being set up to study not only pest control with these new compounds but also biology, biological control and the identification of difficult groups of insects like root maggots and wireworms.

Entomological training in the Province was in the capable hands of Prof. G.J. Spencer of the University of British Columbia, the Society's President in 1951. Many of his students became well-known in their own right, such as D.A. Chant, K. Graham, J.D. Gregson, G.P. Holland, H.R. MacCarthy, and A.L. Turnbull. Between 1934 and 1937, Spencer was also in charge of summer operations at the Dominion Insect Unit in Kamloops following the untimely death of Eric Hearle, the Province's founding medical entomologist. Spencer was much more than just a capable academic. He retired in 1953 and the role of guiding entomologist at UBC was taken over in 1958 by Prof. G.G.E. Scudder for the remainder of the century. Other entomologists expanded the topics covered at that University when C.S. (Buzz) Holling was appointed to the new Institute of Animal Resource Ecology, set up to study the interactions between fisheries and forestry. Holling was its first full-time director and appointed another forest entomologist, W.G. Wellington to it in 1970. The latter took over as director from 1973 to 1979, retiring in 1986. J.H. Myers joined the institute in 1972. The Faculty of Forestry also employed entomologists including Spencer's former student, K. Graham, Professor from 1948-1977 and later, J.A. McLean from 1977 to the present. The Faculty of Agriculture, Plant Science also employed an entomologist, J. Sandess in the late 1960s, succeeded by B. Philogène, R.H. Elliott and in 1983 by the present incumbent, M.B. Isman.

R.A. Ring was hired to teach entomology for a year at UBC in 1964, and after a spell at the Biosystematics Research Institute, Ottawa, returned and was appointed by the University of Victoria in 1966, where he continues to teach.

There was a major influx of entomologists to the newly founded Simon Fraser University in 1967. J.H. Borden had been appointed a year earlier but was soon joined by B.P. Beirne and seven of his staff from the Federal Research Institute for Biological Control in Belleville ON. Beirne set up the Pestology Centre, which flourished (with a change of name to Centre for Pest Management) for about 30 years as an integral part of the Department of Biological Sciences. The Masters of Pest Management Degree

Programme started in 1973 and is still attracting students from all over the world. Over 250 MPM degrees have been awarded since its inception.

The Province's newest University of Northern BC in Prince George opened in September 1994 and one of the first faculty appointed was a former J.H. Borden student, the forest entomologist and inventor, B.S. Lindgren.

By 1951, the predominantly British Victorian naturalists, who had collected and listed the insects in many different groups during the first 50 years, were being replaced, as Marshall (1952) put it, by Canadian 'spray blokes'.

The Dominion Department of Agriculture was then well represented in the Province. The oldest laboratory was the original Experimental Farm Station set up in Agassiz in 1886 by T. Sharpe with the aim of serving the farming community and developing our embryonic agricultural industry. Many of the ornamental trees and shrubs he planted, after clearing the forest at the turn of the century, still stand impressively around the new research building that opened there in 2001. R. Glendenning was in charge of the entomology laboratory at Agassiz for 37 years until his retirement in 1953 and in 1956 a substation for soft fruit was set up in Abbotsford.

The Plant Protection Laboratory in Vancouver had also been running for many years. Vancouver was the site of a Stored Product Insect Laboratory and a Biological Control Investigations Laboratory with J.H. McLeod from the then Dominion Parasite Laboratory in Belleville in charge. Turnbull and Chant were both employed there after they graduated from UBC in the 1950s. A fourth laboratory, for Plant Pathology, was already on the UBC campus and a Dominion Field Crop Insect Laboratory was opened there in 1955.

The Dominion was represented in the Interior by Livestock Insect and Field Crop Insect Laboratories in Kamloops and a Fruit Insect Laboratory in Summerland. There was another Field Crop Insect Laboratory in Victoria. The Kamloops Research Station was directed by R.H. Handford from 1962 to 1970. He was the western expert on the biology and control of grasshoppers since the death of N. Criddle and had a wealth of experience in their management (Riegert 1980).

In 1960 a new Research Station was opened on the UBC campus. One of its main functions was to act as a National Plant Virus Research Laboratory, but the outlying Plant Pathology, Stored Product and Field Crop Insect Laboratories together with a substation in Chilliwack were brought together in a seven-man Entomology Section under H.R. MacCarthy. The station had modern rearing facilities, greenhouses, library and an administrative section. After some 30 years the Department of Agriculture closed the Vancouver Research Station in 1996 and the entomologists moved to Agassiz and Summerland.

Entomology in the Province was directed in 1951 from the Vernon courthouse by the Provincial Entomologist. C.L. Neilson, a talented field man and administrator, was in Vernon at that time and by 1955 had replaced E.R. Buckell's associate I.J. Ward as Provincial Entomologist after Ward's untimely death. Later the headquarters moved to, and remains in, Victoria.

J.C. Arrand was appointed Assistant Provincial Entomologist in 1957 and maintained entomological continuity in the Ministry, retiring as Director of the Crop Protection Branch in 1987. During his tenure, the Province was involved in research into alternatives to organochloride insecticides. Several crop pests had developed resistance to DDT by that time and secondary pests were emerging as the populations of beneficial insects were reduced by the 'pesticide treadmill'. Several mishaps in the 1960s persuaded the Social Credit government of the time to order the Department of Agriculture to draft regulations for the Pharmacy Act in 1965 and to establish a new Analytical Laboratory for pesticides. In 1963, the Provincial Entomology and Plant Pathology Branches and the Field Crops Branch moved to larger buildings in Cloverdale and there were similar but smaller

laboratories in Kamloops, Sidney, Summerland and Victoria. In 1995 the Provincial Laboratories in Cloverdale were closed and most entomologists and their programs moved to modern facilities in the Abbotsford Regional Office.

Forest insect pests were managed by the Canada Department of Agriculture (Science Service) in 1951, and H.A. Richmond, who had carried out forest insect surveys on horseback for R. Hopping in Vernon in the 1920s, was in charge of the Victoria laboratory until 1955. In the interior, the laboratory in Vernon, headed by R. Hopping for two decades solved many of our urgent forest pest problems. D.A. Ross became its head in 1955, but moved to Victoria in 1970 when the Vernon laboratory closed. L.H. McMullen moved to Victoria from Vernon in 1955 and became head of entomological research there in 1965. Many other well known entomologists have worked in these laboratories and more details are given elsewhere in this Volume.

In the 50th ESBC Anniversary volume, Spencer (1952) summarised the 'status of our knowledge of the insects of British Columbia'. He pointed out that federal officers of the Division of Entomology sent their specimens to the Canadian National Collection in Ottawa and that complete lists of Provincial records would be almost impossible to obtain. Many of the specimens of the more colourful Lepidoptera, Hemiptera and Coleoptera were divided between the National and Provincial collections with most of Spencer's own collection at 'The University'. R. Hopping's "huge" beetle collection from Vernon was left to the California Academy of Science where H.B. Leech went, taking his own collection of water beetles with him. At the Provincial Museum in Victoria, G. Hardy, the Botanist/Entomologist, collected Lepidoptera and Coleoptera until his retirement in 1959 but then the collections were almost completely neglected until 1970 when a severe insect infestation was discovered. B. Ainscough volunteered to look after the collection until a full-time curatorial division was established. R.H. Carcasson took over as Senior Curator in 1973 and the collection continued to recover as he and later R.A. Cannings, were in charge of it. Two museum handbooks were published dealing with insects of the Province, 'The Dragonflies' (#35) by R.A. Cannings and K.M. Stuart (1977) and 'The Mosquitoes' (#41) By P. and E.M. Belton (1983).

Our Journal, apart from its name, has not changed greatly. The 50th ESBC Anniversary volume had 17 research papers (as well as the seven retrospectives) in 104 pages. It had 5 full-page advertisements and eight smaller ones, some of which were congratulations. It was typeset, printed on good quality paper, stitched in 'signatures' and 'perfect bound' in 'sugar-bag blue' card by Chapman and Warwick in Vancouver. The latest issue, Vol. 97, 2000, had 16 research papers in 105 pages. It was laser printed, not typeset, and then trimmed to size ('camera ready' apart from a few figures) by the Editor and printed on glossy coated paper using photo-offset by the Reprographics Unit at Simon Fraser University. It is also 'perfect bound' in blue, but is without advertising. Stages in this evolution included green and even a white, stapled cover. R.A. Ring, introduced computer printing in 1992, when the design and printing was done by the Graphics Group at the University of Victoria. The scientific quality and reputation of the Journal has remained one of the highest in Canada.

Our Society also continues to attract enthusiastic and dedicated entomologists (Riegert 1991) and a list of its presidents during the second half-century is appended. On June 14th 1951, 53 members were photographed at the 50th annual general meeting at UBC and a similar number attended our 100th in September 2001 at the Summerland Research Station (Figs. 1,2). A handful of the 1951 veterans maintain an interest in entomology but none attended the 100th meeting. The proportion of student members attending has increased greatly over the years, D.A. Chant and L.E. Wade may have been the only graduate students there in 1951 but today, with four Universities and many Regional Colleges, we

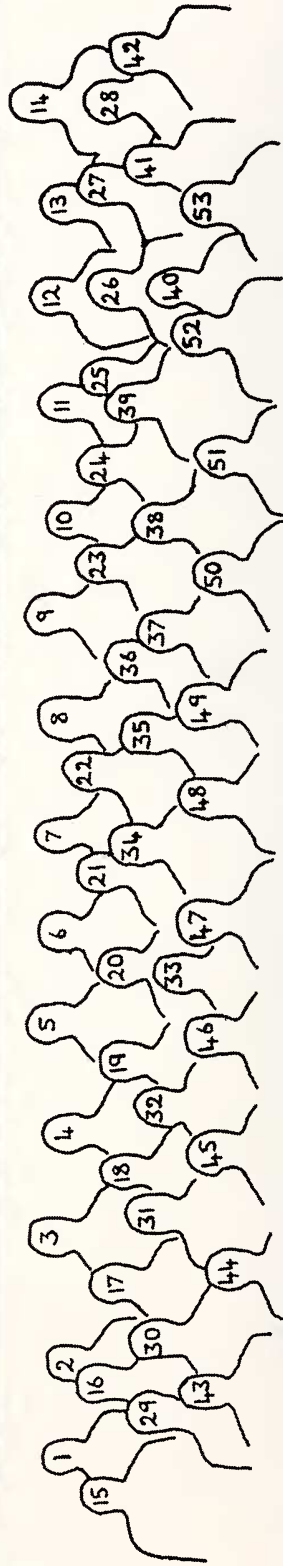
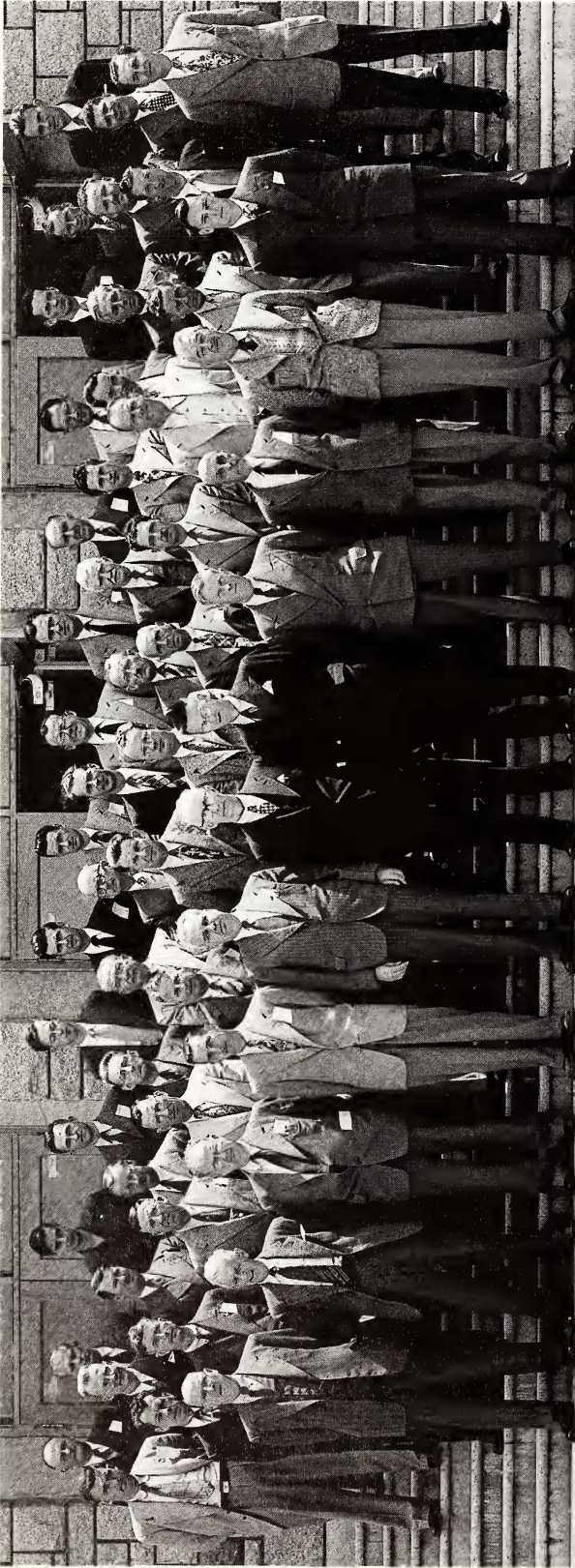


Figure 1. Group photograph of those at the 50th Annual General Meeting of the Entomological Society of British Columbia (taken 14 June 1951 at the University of British Columbia, Vancouver, BC): 1 J.R.J.L. Jones, 2 N.V. Tonks, 3 L.E. Wade, 4 C. Morgan, 5 A.R. Forbes, 6 A.T.S. Wilkinson, 7 A.D. Henderson, 8 P. Zuk, 9 G.E. White, 10 A.E. Barsz, 11 J. Weintraub, 12 D.A. Chant, 13 G.B. Rich, 14 N.B. Wright, 15 W.H. Wilde, 16 R. Robertson, 17 G. Thompson, 18 H.R. MacCarthy, 19. W. Lazorko, 20 D.K. Campbell, 21 C.P. Clausen, 22 W. Waddell, 23 J.W. Eastham, 24 D.R. Finlayson, 25 K. Graham, 26 R.E. Fitzpatrick, 27 F.L. Billings, 28 J. Follwell, 29 H. Richmond, 30 L.C. Curtis, 31 K.M. King, 32 M.C. Lane, 33 W.G. Mathers, 34 H.G. Fulton, 35 C.L. Neilson, 36 J.H. Foster, 37 E.R. Buckell, 38 D. Arnott, 39 O. Hitchcock, 40 C.R. Cunningham, 41 R. Stace-Smith, 42 D.A. Ross, 43 G.J. Spencer, 44 E.P. Venables, 45 M.H. Hatch, 46 J.D. Gregson, 47 W.A. Ross, 48 H.F. Olds, 49 J. Marshall, 50 J.H. McLeod, 51 W. Downes, 52 R. Glendenning, 53 F.L. Banham.



Figure 2. Group photograph of those at the 100th Annual General Meeting of the Entomological Society of British Columbia (taken 27 September 2001 at the Pacific Agri-Food Research Centre, Summerland, BC): 1 R.G. Bennett, 2 A. Henderson, 3 N. Jeans-Williams, 4 N. DeLury, 5 L. Jensen, 6 T. Hueppelsheuser, 7 E. Desautels, 8 B. Roitberg, 9 E. Belton, 10 W. Strong, 11 K.M. Needham, 12 P. Jones, 13 G.G.E. Scudder, 14 P. Belton, 15 R.A. Cannings, 16 L. Overton, 17 A. Borkent, 18 S. VanLaerehoven, 19 J.A. Rumph, 20 J. Cossentine, 21 R.D. Kenner, 22 T. Shore, 23 I. Wilson, 24 H. Philip, 25 Y. Herbison, 26 T. Lowery, 27 D.A. Raworth, 28 C. Guppy, 29 A. Strope, 30 M.-Y. Choi, 31 M. Claudius, 32 H.M.A. Thistlewood, 33 S. Tjokrodingrat, 34 M. Smirle, 35 J. Perry, 36 B. Riel, 37 N. Verpahlt, 38 L. MacIaughlan, 39 L. Harder, 40 K. Deglow

can expect them to make up almost half of those registering. The last issue of *Boreus*, the Society's newsletter, first issued in a formal binding by R.A. Cannings in April 1981 was mailed in June 2001 to 160 'more or less paid up' members according to our Secretary-Treasurer.

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APPENDIX

Presidents of the Entomological Society of British Columbia 1951 - 2001

YEAR	PRESIDENT	AFFILIATION
1951	G.J. Spencer	Zoology, University of British Columbia, Vancouver
1952	H. Olds	Agriculture Canada, Vancouver
1953	J. Marshall	Agriculture Canada, Summerland
1954	J.H. McLeod	Agriculture Canada, Vancouver
1955	M.H. Hatch	University of Washington, Seattle
1956	R.H. Handford	Agriculture Canada, Kamloops
1957	H. Andison	Agriculture Canada, Victoria
1958	M.D. Proverbs	Agriculture Canada, Summerland
1959	P. Zuk	Agriculture Canada, Vancouver
1960	D.A. Ross	Canada Dept. of Forestry, Forest Entomology Laboratory, Vernon
1961	H.R. MacCarthy	Agriculture Canada, Vancouver
1962	C.L. Neilson	BC Department of Agriculture, Victoria
1963	D.P. Pielou	Agriculture Canada, Summerland
1964	R.R. Lejeune	Canada Dept. of Forestry, Forest Biology Laboratory, Victoria
1965	M.G. Thompson	Canada Dept. of Forestry, Forest Biology Laboratory, Victoria
1966	J.C. Arrand	BC Department of Agriculture, Victoria
1967	G.G.E. Scudder	Zoology, University of British Columbia, Vancouver
1968	F.L. Banham	Agriculture Canada, Summerland
1969	H. Madsen	Agriculture Canada, Summerland
1970	W.T. Cram	Agriculture Canada, Vancouver
1971	D.G. Finlayson	Agriculture Canada, Vancouver
1972	R.A. Ring	Biology, University of Victoria, Victoria
1973	J. A. Chapman	Canada, Dept. Fisheries and Environment, Pacific Forestry Research Centre, Victoria
1974	R.D. McMullen	Agriculture Canada, Summerland
1975	T. Finlayson	Biology, Simon Fraser University, Burnaby

- 1976 J.R. Carrow Canada, Department of Environment,
Pacific Forestry Research Centre, Victoria
- 1977 H.S. Gerber BC Ministry of Agriculture, Cloverdale
- 1978 A.L. Turnbull Biology, Simon Fraser University, Burnaby
- 1979 P. Belton Biology, Simon Fraser University, Burnaby
- 1980 R.H. Elliot Plant Science, University of British Columbia, Vancouver
- 1981 A.R. Forbes Agriculture Canada, Vancouver
- 1982 L. Safranyik Canada, Department of Environment,
Pacific Forestry Research Centre, Victoria
- 1983 J.A. McLean Forestry, University of British Columbia, Vancouver
- 1984 R.A. Ring Biology, University of Victoria, Victoria
- 1985 N.P. Angerilli Agriculture Canada, Summerland
- 1986 R.A. Cannings BC Provincial Museum, Victoria
- 1987 B.D. Roitberg Biology, Simon Fraser University, Burnaby
- 1988 M.B. Isman Plant Science, University of British Columbia, Vancouver
- 1989 C.S. Guppy Royal BC Museum, Victoria
- 1990 D.A. Raworth Agriculture Canada, Vancouver
- 1991 J.E. Cossentine Agriculture Canada, Summerland
- 1992 R.S. Vernon Agriculture Canada, Vancouver
- 1993 T.L. Shore Forestry Canada, Pacific Forestry Centre, Victoria
- 1994 S.M. Fitzpatrick Agriculture Canada, Vancouver
- 1995 L.A. Gilkeson BC Ministry of Environment, Victoria
- 1996 G.S. Anderson Biology, Simon Fraser University, Burnaby
- 1997 D.R. Gillespie Agriculture and Agri-Food Canada, Agassiz
- 1998 B.S. Lindgren Biology, University of Northern BC, Prince George
- 1999 M.B. Isman Faculty of Agricultural Science,
University of British Columbia, Vancouver
- 2000 N.N. Winchester Biology, University of Victoria, Victoria
- 2001 R.A. Cannings Royal BC Museum, Victoria

